

Notice of Allowability

Application No.

10/612,704

Examiner

Jaison P. Thomas

Applicant(s)

HERRON ET AL.

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to RCE filed on 12/11/2007.
2. ☒ The allowed claim(s) is/are 11-13, 16, and 18-27.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 20080108.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 12/11/2007 has been entered.

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with John Lamming on 8/15/2007.

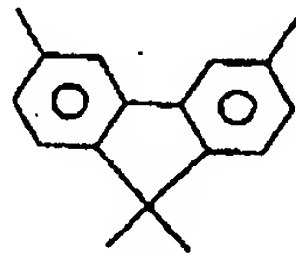
The application has been amended as follows:

1.1 **Cancel** Claims 1-10,14,15 and 28-61.

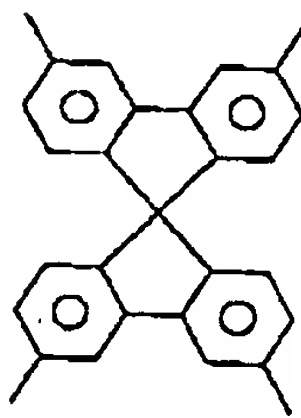
1.2 In Claim 11, line 1, **delete** "in Figure 2" and in lines 11-12, **delete** and **replace** with --Q is selected from a multivalent group consisting of arylamines, silanes, siloxanes,

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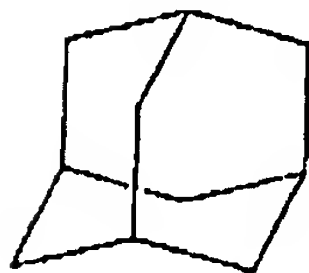
alkynylene groups and heteroalkynylene groups, or from Formulae IV(d)-IV(f):



IV(d)



IV(e)

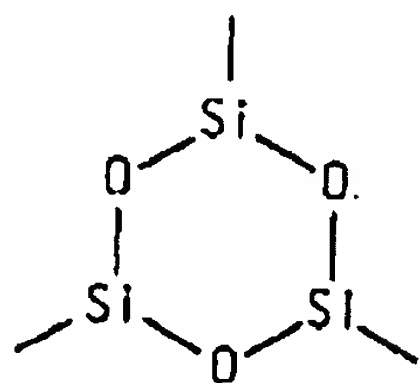


IV(f)

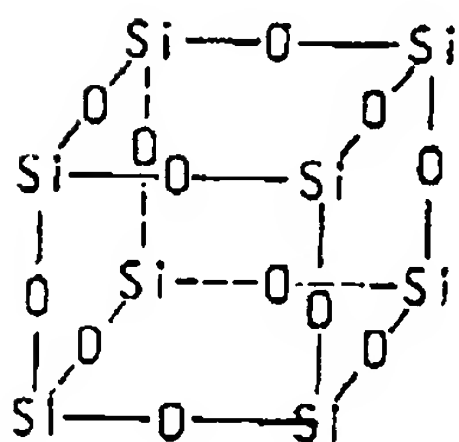
--.

1.3 In Claim 12, line 4, **delete** "with the proviso that when Q is a single bond, p is 0. " and in line 3, **replace** ";" with --.--

1.4 In Claim 16, **delete** and **replace** with --The composition of Claim 11 wherein Q is selected from Formulae IV(g) and IV(h):



IV(g)



IV(h)

EXAMINER'S STATEMENT OF REASONS FOR ALLOWANCE

2. The following is an examiner's statement of reasons for allowance:

The Applicant has submitted two journal articles for consideration in the request for continued examination filed after allowance on 12/11/2007. Redecker et al. (Redecker et al., "Electron transport in starburst phenyquinoxalines," Applied Physics Letters, 75 (1), pp 109-111 (1999)) discloses starburst quinoxaline structures wherein the linking group between the quinoxaline structures is a phenyl group (see Fig. 1). However, Redecker does not teach, suggest or motivate the use of linking groups as specified in the Examiner's Amendment listed above. Yamamoto et al. (Yamamoto et al., "Preparation of New Electron-Accepting Pi-Conjugated Polyquinoxalines. Chemical

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and Electrochemical Reduction, Electrically Conducting Properties, and Use in Light-Emitting Diodes," J. Am. Chem. Soc., 118, pp 3930-3937 (1996)) teaches electroactive polymers made from quinoxaline containing monomers. However, the reference teaches that linking groups are attached to quinoxaline moieties through two different positions on the quinoxaline moieties to form polymeric chains, which are different from the instant Claims since the quinoxaline moieties attach to the linking group through one position only. Yamamoto et al., has no teaching, suggestion or motivation to attach pendant quinoxaline groups to a variable group Q as defined in Claim 11, Formula II. Accordingly, the claimed invention, as a whole, would not have been obvious to one of ordinary skill in the art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jaison P. Thomas whose telephone number is (571) 272-8917. The examiner can normally be reached on Mon-Fri 8:30 am to 5:00 pm.
4. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy P. Gulakowski can be reached on (571) 272-1302. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jaison Thomas
Examiner
1/8/2008

JT


Mark Kopec
Primary Examiner